

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. **(Currently Amended)** A method for enriching the GC base pair content of a DNA molecule the method comprising the steps of (a) providing a DNA template molecule in which at least some of the A residues are base paired with U residues and (b) replicating the DNA template molecule provided in step (a) under conditions in the replication reaction medium in which at least some of the U residues base pair with a G residue, whereby the further replication of the DNA containing the G-U base pair will fix the mutation in at least some of the resulting DNA molecules such that the effect is to cause an AT to GC transition mutation in the DNA molecule.
2. **(Currently Amended)** A method according to claim 1 wherein the DNA template molecule in (a) is produced by replicating a first template DNA molecule in the presence of dUTP so that at least some of the T residues of the first template are replaced by U residues to form a second template molecule.
3. **(Previously Presented)** A method according to claim 1 comprising the steps of (1) providing a first template DNA molecule, (2) replicating the first template DNA molecule in the presence of dUTP so that at least some of the T residues of the first template are replaced by U residues to form a second template molecule and (3) replicating the DNA template molecule produced in step (2) under conditions in the replication reaction medium in which at least some of the U residues base pair with a G residue.
4. **(Previously Presented)** A method according to claim 1 wherein the conditions in which at least some of the U residues base pair with a G residue are provided by an agent which is able to increase the polarity of the replication reaction medium and/or act as a local dehydrating agent.
5. **(Original)** A method according to Claim 4 wherein an excess of dGTP over dATP or dCTP or dTTP is present in the reaction medium during replication.

6. **(Previously Presented)** A method according to Claim 4 wherein the agent which is able to increase the polarity of the reaction medium and/or act as a local dehydrating agent is polyethylene glycol (PEG).
7. **(Original)** A method according to Claim 6 wherein the PEG is PEG300- PEG8000.
8. **(Previously Presented)** A method according to claim 1 wherein the DNA replication is by a polymerase chain reaction.
9. **(Previously Presented)** A method according to claim 1 wherein the DNA molecule whose GC base pair content is to be enriched comprises all or part of a natural gene or cDNA.
10. **(Original)** A method according to Claim 9 wherein the gene or cDNA has a GC base pair content lower than 50%.
11. **(Previously Presented)** A method according to Claim 9 wherein the gene or cDNA encodes a polypeptide of interest.
12. **(Original)** A method according to Claim 10 wherein the polypeptide is any of an enzyme, an antibody chain or an antigen.
13. **(Previously Presented)** A method according to claim 1 comprising the further step of cloning the DNA molecule whose GC base pair content has been enriched.
14. **(Original)** A method according to Claim 13 wherein the DNA molecule whose GC base pair content has been enriched is cloned into an expression vector.
15. **(Previously Presented)** A method according to claim 1 comprising the further step of sequencing the DNA molecule whose GC base pair content has been enriched.

16. **(Original)** A method according to Claim 15 comprising the further step of selecting those of the DNA molecules whose GC base pair content is has been enriched wherein the coding sense has been retained.
17. **(Original)** A method according to Claim 15 comprising the further step of selecting those of the DNA molecules whose GC base pair content has been enriched wherein coding sense has been altered.
18. **(Original)** A method according to Claim 11 comprising the further step of expressing a polypeptide from the gene or cDNA whose GC base pair content has been enriched.
19. **(Previously Presented)** A DNA molecule enriched for GC base pair content prepared by the method of claim 1.
20. **(Previously Presented)** A method for making a mutant polypeptide with altered properties compared to the polypeptide encoded by a given DNA molecule, the method comprising (a) enriching the GC base pair content of the DNA molecule according to the method of claim 1, (b) expressing the polypeptide encoded by the DNA molecule whose GC base pair content has been enriched in step (a), and (c) selecting a polypeptide with altered properties.
21. **(Original)** A method according to Claim 20 wherein the polypeptide is any of an enzyme, an antibody chain or an antigen.
22. **(Original)** A method according to Claim 21 wherein the polypeptide is an enzyme which has been selected in step (c) for improved catalytic properties.
23. **(Original)** A method according to Claim 22 wherein the enzyme is encoded by the *albD* gene of *Pantoea dispersa*.
24. **(Previously Presented)** A mutant polypeptide prepared by the method of claim 20.

25. **(Previously Presented)** A mutant AlbD polypeptide prepared by the method of claim 20 wherein Ser40 has been replaced by another amino acid residue.
26. **(Original)** A mutant AlbD polypeptide according to Claim 25 wherein Ser40 has been replaced with Gly.
27. **(Previously Presented)** A mutant AlbD polypeptide according to Claim 25 ~~or 26~~ wherein G1u25 has been replaced by Arg, Lys27 has been replaced by Glu and Ser40 has been replaced by Gly.
28. **(Original)** A polynucleotide encoding the mutant AlbD polypeptide according to Claim 25.
29. **(Original)** An expression vector containing a polynucleotide according to Claim 28.
30. **(Original)** A transgenic plant containing a polynucleotide according to Claim 28.
31. **(Original)** A kit of parts for enriching the GC base pair content of a DNA molecule in a replication reaction medium comprising (a) dUTP and (b) an agent which is able to increase the polarity of the replication reaction medium and/or act as a local dehydrating agent.
32. **(Original)** A kit of parts according to Claim 31 wherein the agent which is able to increase the polarity of the replication reaction medium and/or act as a local dehydrating agent is a polyethylene glycol.
33. **(Previously Presented)** A kit of parts according to Claim 31 further comprising other reagents for carrying out a DNA amplification reaction.
34. **(Cancelled)**

35. **(Previously Presented)** A method according to Claim 5 wherein the agent which is able to increase the polarity of the reaction medium and/or act as a local dehydrating agent is polyethylene glycol (PEG).
36. **(Previously Presented)** A method according to Claim 10 wherein the gene or cDNA encodes a polypeptide of interest.
37. **(Previously Presented)** A DNA molecule enriched for GC base pair content prepared by the method of claim 2.
38. **(Previously Presented)** A DNA molecule enriched for GC base pair content prepared by the method of claim 3.
39. **(Previously Presented)** A DNA molecule enriched for GC base pair content prepared by the method of claim 4.
40. **(Previously Presented)** A DNA molecule enriched for GC base pair content prepared by the method of claim 5.
41. **(Previously Presented)** A DNA molecule enriched for GC base pair content prepared by the method of claim 6.
42. **(Previously Presented)** A DNA molecule enriched for GC base pair content prepared by the method of claim 7.
43. **(Previously Presented)** A DNA molecule enriched for GC base pair content prepared by the method of claim 8.
44. **(Previously Presented)** A DNA molecule enriched for GC base pair content prepared by the method of claim 9.

45. **(Previously Presented)** A DNA molecule enriched for GC base pair content prepared by the method of claim 10.
46. **(Previously Presented)** A DNA molecule enriched for GC base pair content prepared by the method of claim 11.
47. **(Previously Presented)** A DNA molecule enriched for GC base pair content prepared by the method of claim 12.
48. **(Previously Presented)** A DNA molecule enriched for GC base pair content prepared by the method of claim 13.
49. **(Previously Presented)** A DNA molecule enriched for GC base pair content prepared by the method of claim 14.
50. **(Previously Presented)** A DNA molecule enriched for GC base pair content prepared by the method of claim 35.
51. **(Previously Presented)** A DNA molecule enriched for GC base pair content prepared by the method of claim 36.
52. **(Previously Presented)** A mutant polypeptide prepared by the method of claim 21.
53. **(Previously Presented)** A mutant polypeptide prepared by the method of claim 22.
54. **(Previously Presented)** A mutant polypeptide prepared by the method of claim 23.
55. **(Previously Presented)** A mutant AlbD polypeptide according to Claim 26 wherein G1u25 has been replaced by Arg, Lys27 has been replaced by Glu and Ser40 has been replaced by Gly.

56. **(Previously Presented)** A kit of parts according to Claim 32 further comprising other reagents for carrying out a DNA amplification reaction.
57. **(Previously Presented)** A mutant AlbD polypeptide prepared by the method of claim 21 wherein Ser40 has been replaced by another amino acid residue.
58. **(Previously Presented)** A mutant AlbD polypeptide prepared by the method of claim 22 wherein Ser40 has been replaced by another amino acid residue.
59. **(Previously Presented)** A mutant AlbD polypeptide prepared by the method of claim 23 wherein Ser40 has been replaced by another amino acid residue.